Original article

Exploring the use of Routine Outcome Monitoring in the treatment of patients with a psychotic disorder

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A B S T R A C T

Background: Routine Outcome Monitoring (ROM) has become part of the treatment process in mental health care. However, studies have indicated that few clinicians in psychiatry use the outcome of ROM in their daily work. The aim of this study was to explore the degree of ROM use in clinical practice as well as the explanatory factors of this use.
Methods: In the Northern Netherlands, a ROM-protocol (ROM-Phamous) for patients with a psychotic disorder has been implemented. To establish the degree of ROM-Phamous use in clinical practice, the ROM results of patients ($n = 204$) were compared to the treatment goals formulated in their treatment plans. To investigate factors that might influence ROM use, clinicians ($n = 32$) were asked to fill out a questionnaire about ROM-Phamous.
Results: Care domains that were problematic according to the ROM-Phamous results were mentioned in the treatment plan in 28% of cases on average (range 5–45%). The use of ROM-Phamous in the treatment process varies considerably among clinicians. Most of the clinicians find ROM-Phamous both useful and important for good clinical practice. In contrast, the perceived ease-of-use is low and most clinicians report insufficient time to use ROM-Phamous.
Conclusions: More frequent ROM use should be facilitated in clinicians. This could be achieved by improving the fit with clinical routines and the ease-of-use of ROM systems. It is important for all stakeholders to invest in integrating ROM in clinical practice. Eventually, this might improve the diagnostics and treatment of patients in mental health care.

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1. Introduction

During the last decade, Routine Outcome Monitoring (ROM) has become part of the treatment process in mental health care [1–3]. ROM can be described as the use of standard assessments to systematically and continuously monitor the health of patients, for the purpose of improving their care [4]. ROM may improve the diagnostics and treatment of psychiatric problems [5–7]. Feedback

concerning treatment outcome seems beneficial in improving the quality of mental health care [8]. A study by Slade et al. (2006) revealed that the routine use of outcome measures did not improve patient-rated unmet needs and quality of life, but did reduce psychiatric inpatient admissions [9].

Psychotic disorders usually involve problems in multiple domains and for a prolonged period of time. This makes treatment complex. Also, somatic problems often go undetected and untreated in patients with severe mental illness [10,11]. De Hert et al. (2009) stress the need for awareness of the potential metabolic side effects of antipsychotic medication, implementation of screening assessments, and referrals for the treatment of somatic conditions [12]. ROM might be helpful to achieve these goals. However, several studies have indicated that few clinicians in psychiatry use the outcome of ROM in their day-to-day work

[13,14]. A previous study conducted by our research group also revealed a discrepancy between care needs identified with ROM and treatment goals mentioned in the treatment plans of patients with a psychotic disorder [15]. Thus, in general, the use of ROM in the treatment process appears to be suboptimal.

The way clinicians experience ROM systems might be a barrier in the use of ROM. In general, both perceived usefulness and ease-of-use are significantly correlated with the acceptance of a system [16]. Clinicians describing their experience with ROM indicated that ROM could help reflect upon and evaluate progress of service-users and that service-user input is of great importance [17]. Practical issues such as time consumption and effort, fear that ROM might create competition between services, teams and practitioners and fear and mistrust about use of ROM-data by third parties were described as disadvantages of ROM [17]. In line with this, clinicians may perceive ROM as external control and management, which may lead to resistance [18,19]. Therefore, from the clinicians' perspective, the disadvantages of working with ROM should be balanced by the utility of the data [20].

In the current study, a ROM protocol for patients with a psychotic disorder (the Pharmacotherapy Monitoring and Outcome Survey - ROM-Phamous) was used. This comprehensive system has been in use in the Northern Netherlands since 2007. ROM-Phamous yearly assesses mental and physical health and social well being of patients with standardized instruments. The aim of this study was to explore the degree of ROM use in clinical practice and explanatory factors of this use. To explore the degree of ROM use in clinical practice, we compared the presence of care needs according to ROM-Phamous results to treatment goals described in patients' treatment plans. To examine which factors may influence ROM use, we explored clinicians' experiences with ROM-Phamous. This included self-reported usage behaviour, perceived usefulness, ease-of-use, facilitating conditions (such as time), and emotions of clinicians concerning ROM-Phamous. This may give insight into the areas in which interventions are needed to achieve a more optimal use of ROM-Phamous and ROM in general.

2. Methods

2.1. ROM use in clinical practice

To establish the degree of ROM use in clinical practice, ROM-Phamous results of patients were compared with treatment goals mentioned in their treatment plans. This is a replication of our previous study. A detailed description of the methodology can be found in the previous article [15].

2.1.1. Participants (patients)

The current study used ROM assessments of patients with a psychotic disorder that were available at the start of the study. In total, 300 patients receiving care at Lentis Psychiatric Institute were randomly selected from the 2014 ROM-Phamous database ($n = 1567$). Patients with diagnoses other than a psychotic disorder were excluded from the sample ($n = 96$). The Medical Ethical Committee of the University Medical Centre Groningen (UMCG) confirmed that this study did not require additional ethical approval. Approval of the department head at Lentis Psychiatric Institute was obtained for the use of anonymised data from the Electronic Patient Record (EPR). The study was executed in line with national legislation and the Declaration of Helsinki.

2.1.2. Procedure

The prevalence of positive and negative symptoms, psychosocial problems (with social functioning and daily activities) and

modifiable cardiovascular risk factors (overweight, diabetes mellitus, hypertension, and dyslipidaemia) were calculated with the available ROM-data according to predefined cut-off points (for more details, see Tasma et al. (2016) [15]). Next, the first treatment plan after the ROM-screening was obtained from the EPR. Two independent researchers (MT and LvdH) scored whether the aforementioned care needs were reported in the treatment plans. Only patients with available ROM data and psychiatric treatment plan were included in the analysis.

2.1.3. Data analysis

Descriptive statistics were used in IBM SPSS Statistics 20 [21]. Demographic information of patients (age, gender, and duration of illness) in the sample was compared to all patients in the ROM-database, using Chi-Square and t-tests, to investigate the representativeness of the sample. For each investigated care domain, patients were divided into four categories: 1) the care domain was not problematic according to the ROM results and was not mentioned in the treatment plan, 2) the care domain was not problematic according to the ROM results, but was mentioned in the treatment plan, 3) the care domain was problematic according to the ROM results, but was not mentioned in the treatment plan and 4) the care domain was problematic according to the ROM results and was mentioned in the treatment plan. Thus, categories 1 and 4 indicate a match between the ROM results and the treatment plan, while categories 2 and 3 indicate a mismatch.

2.2. Clinicians' experiences with ROM

2.2.1. Participants (clinicians)

Clinicians employed at four psychiatric institutes in the Northern Netherlands, all of which use the ROM-Phamous protocol, participated in the second part of this study. Clinicians were psychiatrists, psychologists, and nurse practitioners in both in- and outpatient settings. No exclusion criteria were formulated for the clinicians.

2.2.2. Procedure

A questionnaire about ROM-Phamous was digitally distributed to all clinicians ($n = 80$), with a request to share their opinion to help improve ROM-Phamous. Individual responses would not be communicated to their organisation or manager and data were stored anonymously. After one week, a reminder was sent to the non-responders, which was repeated two weeks later.

2.2.3. Measures

We used the self-developed theory-based 'ROM-Phamous State-of-Mind' questionnaire consisting of 31 items (in Dutch) (based on Van Offenbeek et al. (2003) [22]). The first 22 items consisted of statements about ROM-Phamous. These had to be rated on a Likert scale from 1 (completely disagree) to 5 (completely agree). The items constituted seven subscales, measuring usage behaviour, support, power, emotion, ease-of-use, usefulness, and facilitating conditions. The internal consistency of the usage behaviour, emotion, ease-of-use, usefulness, and facilitating conditions scales was high in the current study (Cronbach's Alpha $\geq$ .7), while the internal consistency of the support and power scales was low (Cronbach's Alpha $<$ .4). Therefore, the latter two subscales were not included in the analysis, except for the item of the power scale 'I experience ROM-Phamous as a form of behavioural control' (item 13), as previous studies revealed that ROM was experienced as external control and management [18,19]. Example items of the scales included in the analysis are:

- 'I use the outcome of ROM-Phamous in the treatment of my patients' (usage behaviour, item 2);